

(A)

1. (Amended) An exposure apparatus, comprising:
an illumination optical system for illuminating an
original with ultraviolet light;
a projection optical system for projecting a
pattern of the original onto a substrate to be exposed; and
gas purging means for replacing an inside space,
which contains [where] optical components of at least one of
said illumination optical system and said projection optical
system [are placed], with a gas having [containing]
substantially no water content.

(B)

2. (Amended) An apparatus according to Claim 1,
wherein said gas purging means comprises [includes] a sensor
for detecting the level of gas replacement, and control means
for controlling said gas purging means on the basis of an
output signal of said sensor.

(C)

5. (Amended) An apparatus according to Claim 1,
further comprising passage means, [for] mutually
communicating spaces separated by said optical components,
for assisting in gas purging by said gas purging means.

(D)

6. (Amended) An exposure apparatus, comprising:
an illumination optical system for illuminating an
original with ultraviolet light;

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a projection optical system for projecting a pattern of the original onto a substrate to be exposed; gas purging means for replacing an inside space, which contains [where] optical components of at least one of said illumination optical system and said projection optical system [are placed], with a particular gas, said optical components comprising at least one lens; [and] passage means, [for] mutually communicating spaces separated by said optical components, for assisting in gas purging by said gas purging means; and a support for supporting said at least one lens, wherein said passage means comprises an aperture formed in said support.

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9. (Amended) An exposure apparatus comprising:
an illumination optical system for illuminating an original with ultraviolet light;
a projection optical system for projecting a pattern of the original onto a substrate to be exposed;
gas purging means for replacing an inside space,
which contains optical components of at least one of said illumination optical system and said projection optical system, with a particular gas, said optical components comprising at least one lens;
passage means, mutually communicating spaces separated by said optical components, for assisting in gas

~~purging by said gas purging means, [according to Claim 6,
wherein said optical components include a lens, and] wherein
said passage means [for gas purging] comprises a notch
provided on said at least one lens.~~

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10. (Amended) An apparatus according to Claim 6,
wherein a straight line connecting adjacent passage means
provided in [one and] the same casing for gas purging, is not
[extends out of] parallel to an optical axis of said at least
one lens [a lens which is one of the optical components].

11. (Amended) An apparatus according to Claim 1
or 6, further comprising a path [wherein a path is] defined
within the space for allowing gas to flow [gas flowing] from
a gas inlet to a gas outlet, for assisting in gas purging by
said gas purging means.

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12. (Amended) An apparatus according to Claim 1
or 6, further comprising a light source that includes
[having] one of a KrF excimer laser, an [a] ArF excimer laser
and an F₂ excimer laser.

Please add claims 14 through 18 as follows:

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--14. An exposure apparatus, comprising:
an illumination optical system for illuminating an
original;
a projection optical system for projecting a
pattern of the original onto a substrate to be exposed;
gas purging means for replacing, with a particular
gas, an inside space which contains optical components of at
least one of said illumination optical system and said
projection optical system, said optical components comprising
at least one lens; and
passage means, mutually communicating spaces
separated by said optical components, for assisting in gas
purging by said gas purging means,

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wherein a straight line connecting adjacent passage
means provided in the same casing for gas purging, is not
parallel to an optical axis of said at least one lens.

15. A device manufacturing method, comprising:
illuminating an original with ultraviolet light
using an illumination optical system;
projecting, using a projection optical system, a
pattern of the original onto a substrate to be exposed to
manufacture a device; and
replacing, using gas purging means, an inside
space, which contains optical components of at least one of

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the illumination optical system and the projection optical system, with a gas having substantially no water content.

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16. A device manufacturing method, comprising:
illuminating an original with ultraviolet light using an illumination optical system;
projecting, using a projection optical system, a pattern of the original onto a substrate to be exposed to manufacture a device;

replacing, using gas purging means, an inside space, which contains optical components of at least one of the illumination optical system and the projection optical system, with a particular gas, the optical components comprising at least one lens;

mutually communicating, using passage means, spaces separated by the optical components, for assisting in gas purging by the gas purging means; and

supporting the at least one lens using a support,
wherein the passage means comprises an aperture formed in the support.

17. A device manufacturing method, comprising:
illuminating an original with ultraviolet light using an illumination optical system;

projecting, using an illumination optical system, a pattern of the original onto a substrate to be exposed to manufacture a device;

replacing, using gas purging means, an inside space, which contains optical components of at least one of the illumination optical system and the projection optical system, with a particular gas, the optical components comprising at least one lens;

mutually communicating, using passage means, spaces separated by the optical components, for assisting in gas purging by the gas purging means, the passage means including a notch provided on the at least one lens.

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18. A device manufacturing method, comprising:

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illuminating an original using an illumination optical system;

projecting, using a projection optical system, a pattern of the original onto a substrate to be exposed to manufacture a device;

replacing with a particular gas, using gas purging means, an inside space which contains optical components of at least one of the illumination optical system and the projection optical system, the optical components comprising at least one lens; and